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UNITED STATES DEPARTMENT OF AGRICULTURE  
Rural Electrification Administration  
St. Louis 2, Missouri

Instructions to Field Representatives

Relating to Supplementary Field Appraisal

Economic Factors in Area Served by REA-Financed System

Your own observation and appraisals are most significant. Give an appropriate answer for each question. Information, comments and data should reflect the situation existing at the time of the report, and if question is irrelevant or you cannot determine the answer, indicate by such comments as: Unknown, question not applicable to area, etc.

If more than one county is to be included in the area-coverage plans of the system the field representative will first determine whether a separate field appraisal relating to economic factors should be made for each county in which the distribution lines are located, or if a single appraisal will adequately evaluate all factors.

Usually all of a county, or significant parts of several counties, comprise the territory covered by the system's area-coverage plans. A separate appraisal should probably be made for each county involved.

If, however, the field representative ascertains that the entire area to be served is of sufficient uniformity in respect of all factors evaluated in the appraisal form, he may choose to make one overall appraisal. If this is the case, he should clearly indicate in his remarks why he thinks the one overall appraisal is sufficient. However, any minor variations for a particular factor, or factors, still should be described even though they are not applicable to the entire area.

With Specific Reference to the items listed in the Field Appraisal Form AL-61

1. Describe topography with such terms as level, rolling, hilly, slopes very steep, etc.; Valleys-narrow, broad, low-subject to frequent flooding, etc. If more than one type of topography prevails this should be so indicated. Attach a sketch map or other appropriate small map for proper orientation and for purpose of location, delineating proposed area to be served.
2. Describe forest cover or vegetation such as: timber now suitable for harvest, cutover timber areas, desert grass not suitable for pasture, prairie grassland pastures, timber pasture, cypress swamps, salt grass marshland, native pasture, etc.
3. Indicate changes in types of farming as shifts from general livestock to dairying, from feeding steers to producing feeder cattle, etc.

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4-I- (a). The proposed line may enter a specialized area where farming is definitely more intensive than for the county as a whole. For example, in a western state a line may extend into a small irrigated area where farms are small, say 80 acres, whereas generalized statistical data for the county as a whole may indicate an average size of 700-800 acres. Predominant size of farms means that size which occurs most frequently.

(b). The predominant size may be changed, for example, by irrigation. If the size of farms is predominantly 240 acres without irrigation, under irrigation this size may be divided in four 80 acre farms. This is a normal expectancy since a more intensive system of farming is practiced under irrigation. The size may be increased by combining farms, such as, changing from an intensive type of farming to a pasture system of farming.

(c). Draining swamp lands and establishing new farms on such lands may account for an increase in the total land area in farms. Federal purchase of an area for a national forest is an example where a decrease in total land area in farms would result.

(d) Pattern of settlement may vary widely. In an area of highly productive land, farms may be small giving a concentrated uniform pattern. The system's area may also include an upland area where farms are large. The pattern here may be scattered, yet uniform. In a ranch type of farming area the pattern would be scattered. If the size of ranches varies say from 5,000 to 25,000 acres, settlement would be scattered and not uniform.

II. A Non-mechanized farm is one on which the tools are very simple, such as small plows drawn by one horse or mule, double shovels, hoes, etc. A small share-cropper cotton farm probably would be a good example. A Low-mechanized farm is one where common horse drawn machinery is used, such as one-row cultivators, riding plows, mowers, binders. Usually two or more horses (or mules) are required for such machines. A Medium-mechanized farm is one where some power machines are used, such as tractor for pulling some implements as plows, binders, cultivating. A Highly-mechanized farm is one where practically all farm machinery is power operated. Such farms would probably have tractors, combines, power mowers, milking machines, etc. and horse-power is practically non-existent. Of course, one must use judgment in applying the above examples cited. For example, one wouldn't expect to find a milking machine on a farm that did not milk cows extensively. The machines of necessity would have to fit the type of farming practiced. Also, if the type of farming is such that machinery is not used extensively in crop production, then look for the extent and use of power around the farmstead.

Mechanization may indicate rapid and ready acceptance of electrically operated farm equipment. Non-mechanization may be due to local community customs which would not apply to electricity if it were made available. On the other hand, it may be due to the type of farming, tenure, etc.

5. (a). This refers particularly to unusual areas where the crop specialty contributes a significant portion (at least 5 per cent) of the cash income. Examples are sweet corn for canning, sugar beets, etc. To indicate importance, give the per cent of total cash income that the specialty crop contributes or what per cent of the crop land is devoted to each specialty crop or crops.

(b). Consider such factors as climate, special soils, transportation, marketing outlets in determining future possibilities for development of crop specialties.

(c). Examples of electrical equipment or facilities for use with specialty crops are: potato graders, pea viners, sweet potato curing barns or sheds, cold storage for fruits as for apples. Indicate whether the particular equipment needed could be cooperatively or should be individually owned.

6. This is a very important section of this appraisal. The percentage of present consumers who have the installations indicated when considered with the age of the system will be an indication of how quickly farmers make use of facilities in their farming and household operations after electricity is available to them. With respect to potential consumers, this will indicate load building possibilities for the system. In Section "C" - Family Living - include both farm and rural non-farm homes in the estimates. If any specific items are important in the area and are not listed, use the extra lines provided for such appliances.

7-a-(1). This refers particularly to special outlets which are or may become available that will induce farmers to make greater use of electricity. An example would be the development in or near the area of a special market for milk such that farmers would shift more to dairying and thus make greater use of such appliances as electric milkers and coolers.

(2). If outlets are available, are they being fully utilized and if not, why? If the utilization of these markets is practicable, could farmers be induced to use them more?

(3). How will the electrical load be affected by greater utilization of markets? Are present lines designed to carry the additional loads?

b-(1). If the area is particularly adapted to producing a product not now being produced because of lack of marketing outlet, what are the possibilities of getting a processor (or outlet) located in the area? For example, the area might be a good vegetable producing area. Could a canner or frozen food processor be induced to locate in the area?

(2). How would such an outlet affect the use of electricity?

c- Describe briefly the transportation facilities available or those that may become available. Are new highways, roads or railroads planned to serve the area?

8. (a). Is ownership of farms by farm operators increasing or decreasing? What per cent of farms are owner-operated? Is ownership stable, that is, is this an area where the number of owner-operated farms remains about the same but individuals owning the farms change frequently.

(b). Reasons for changes, for example, farmers may retire and sell their farms, the area may be close to a city and city people may be active in purchasing farms.

(c). Stability of tenure may be indicated by the percentage change in total tenancy for a period (say last 5 years) and/or by frequency of movement of a tenant from farm to farm.

(d). Reasons for tenants moving, for example, may be: farm was sold, more satisfactory leasing agreement elsewhere, tenant purchased another farm. Electricity on the tenant farm is rapidly becoming a factor in getting good tenants. Good tenants become owner-operators.

(e). Tenure usually is more stable for those tenants who are kin of their landlords.

9. Particularly significant are factors that affect land values, such as, building of a farm-to-market highway through an area that previously had poor outlets; in river bottoms, improvements in protection from floods as levees, number of years bonded indebtedness has to run.

10. (a). Farmers may be assuming greater mortgage loads such as buying additional land and paying for it over a period of years. City workers may be buying land in the area as a place to go in case of depression and they lose their jobs. Sometimes it is necessary for this class of buyers to give high mortgages.

(b). Farm foreclosure experience may be indicated by the number of farm mortgages foreclosed in the area and best indicated by percentage of total farms affected by foreclosures. Foreclosures in the period of the thirties may be a good period to use for this.

11. (a). Many factors affect farm income - change in prices, yields above the average, unusually good weather, special marketing outlets, change in type of farming, education leading to improvement in organization and farming methods, etc.

(b). Do not overlook recent changes, if any, resulting from diversification programs or the "live-at-home" programs, or Victory garden programs, etc., which if continued because electrification facilities allow adequate processing, storage, etc., may directly affect the temporary or permanent nature of their incomes.

(c). The percentage of the total food supply for an average family produced on the farm will vary considerably from area to area (and also from farm to farm). For example, many families in the Ozarks produce as much as 90 per cent of their food supply on the farm. Use farm prices in estimating values - not retail market prices.

(d) Usually farm income is not stable from year to year in an area that depends upon a single crop or enterprise for income. Climatic conditions in a particular year may be such that the enterprise is a failure, or prices may be such that income for a particular year may be very low. A good example is a farm, say in Kansas, that produces only wheat. Usually income in an area will be more stable if farming enterprises are quite diversified. The failure of one enterprise will then not have too great an effect on total income.

12. It is desirable to look into the experience relating to other cooperatives operating in the area. A high participation with favorable experience may indicate the potential degree of success of an REA co-op.

13. (a) Standards of living of an area can be evaluated by observing the conditions of homes, number and condition of automobiles, general nutritional status of people, etc.

(b) If the living standard is or has been low, indicate the improvement that has taken place. For example, in some areas nutritional status has been low. The Farm Security Administration has had a very active program in getting farmers to raise and preserve or store more home produced food so that the diet will be improved.

(c) Education may help attain a higher standard of living. The proper use of electrical facilities may also help.

14. (a) How much of the area is in a National or State Forest, etc.? If not in, is proposed construction near National Forest, etc.? Does the line cross a Unit? If so, give reason for crossing.

Estimate the number of farm units that would be eliminated during the loan period (35 years) if all or part of an area is to be purchased for forest reserve. It should be noted that certain lands in forest reserve purchase areas are considered to be "non-purchasable" due to price limitations and other factors. Consequently, not all of the farms or non-farm units may be affected. An estimate is necessary, however, of the decrease in number of consumers which will result in forest reserve plans. Likewise, in some forest reserve areas there may take place an increase in recreational and other types of consumers, and this should be indicated.

(b) The stability of farmers in an area subject to floods or in a flood spillway may be questionable. Such information as number of years area has been flooded, relative frequency of floods, number of times a flood spillway has been used, whether or not any of the system is in an area to be flooded by dam construction or by flooding from raising or lowering of a lake level, may give an indication of this.

(c) Irrigation offers possibilities of load building. Present extent and future possibilities of development are, therefore, very important. What are present water rates and can a saving be accomplished by use of electricity?

- (d) Drainage is done with the aim of making an area economically productive. To what extent do costs and drainage taxes burden the area?
- (e) Farmers in dryland farming areas may have problems peculiar to farming adapted to such areas. Their incomes depend to a high degree on conditions over which they may have little or no control. The crop insurance program covers this aspect of economic problems. A comparison of crop insurance rates may indicate the extent of crop hazards experienced in the area. Give information on number of years of crop failure, below average yields, etc.
- (f) Hazards. In general this section is self-explanatory. Hazards to farming generally are due to climate or insect pests. If damage or losses occur frequently, this definitely will affect status of farming in the area.
- (g) Usually these special tax problems arise from levee and drainage taxes, special road districts, special school districts, etc.
- (h) What per cent of the farm operators work off-the-farm part-time in such industries as canneries, sawmills, mining, oil field work, rural factories, forestry, etc. Estimate annual income per family from such work. Actually in some areas part-time farmers depend upon the farm for a source of food and housing and depend upon outside work for their cash income.
- (i) Mineral or oil operations may offer a means of lead building in addition to offering employment in the area.
- (j) There are many examples of rural industries - canneries, milk condensaries, egg drying plants, toy and souvenir shops, furniture shops, forest products, processing plants, small packing plants, garment factories, etc.
- (k) 1. Commercial consumers include stores, filling stations, machine shops, garages, etc. Other includes schools, churches, community buildings, etc.
- (l) 1. Non-farm residences include sections near town or villages where people work in the town; cross-roads residences where people operate a filling station, store, machine shop, etc.; summer and weekend cottages.  
2. What are the possibilities of increasing or decreasing the number of non-farm residences? This may come about by building up of a resort or recreation area, or if the timber in an area is harvested and employment is no longer available, mines or oil fields may be closed, non-farm residences may decrease.  
3. Self-explanatory  
4. Self-explanatory  
5. Self-explanatory

- (n) 1. Includes stores, filling stations, garages, etc.
- 2. About how many kwh per month will they average using?
- (n) A resort area may make it possible to electrify an area from the stand-point of load building.
- (o) People in many places are becoming very interested in locker plants.
- (p) The fieldman should make any comments he may wish with respect to the area and especially comment on any item not previously covered in the appraisal.

